

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A device comprising: i) a first microchannel; ~~and~~ ii) a second microchannel, said first and second microchannels etched in a substrate so as to be intersecting[[,]]; ~~and~~ iii) a meltable material disposed within said first microchannel, said meltable material comprising solder; and iv) a heating element associated with said meltable material.
2. (Canceled)
3. (Original) The device of Claim 1, wherein said substrate is selected from the group consisting of glass and silicon.
4. (Canceled)
5. (Original) The device of Claim 1, wherein said solder comprises a eutectic alloy of tin and lead.
6. (Original) The device of Claim 5, wherein said alloy comprises 60:40 Sn:Pb.
7. (Currently Amended) The device of Claim [[4]] 5, wherein said solder comprises 40:60 Sn:Pb.
8. (Canceled)
9. (Original) The device of Claim 1, further comprising a diaphragm positioned such that it is capable of touching said meltable material when extended.
10. (Currently Amended) A method, comprising:
 - a) providing a device comprising: i) a first microchannel; ~~and~~ ii) a second microchannel, said first and second microchannels etched in a substrate so as to be

intersecting[,,]; iii) a meltable material disposed within said first microchannel, said meltable material comprising solder, said meltable material associated with a heating element; and

b) heating said meltable material with said heating element such that said meltable material at least partially liquifies to create a liquified material and such that said substrate is not damaged, wherein said liquified material moves into said second microchannel.

11. (Original) The method of Claim 10, further comprising c) allowing said meltable material to cool.

12. (Canceled)

13. (Original) The method of Claim 10, wherein said substrate is selected from the group consisting of silicon and glass.

14. (Canceled)

15. (Currently Amended) The method of Claim [[14]] 10, wherein said solder comprises a eutectic alloy of tin and lead.

16. (Original) The method of Claim 15, wherein said alloy comprises 40:60 Sn:Pb.

17 - 21. (Canceled)

22. (New) A device comprising: i) a first microchannel; ii) a second microchannel, said first and second microchannels etched in a substrate so as to be intersecting; iii) a meltable material disposed within said first microchannel; iv) a diaphragm configured such that said diaphragm, when extended, touches said meltable material.

23. (New) The device of Claim 22, wherein said meltable material comprises solder.

24. (New) The device of Claim 23, wherein said solder comprises a eutectic alloy of tin and lead.
25. (New) The device of Claim 24, wherein said alloy comprises 40:60 Sn:Pb.
26. (New) The device of Claim 22, wherein said substrate is selected from the group consisting of silicon and glass.
27. (New) The device of Claim 22, further comprising a heating element associated with said meltable material.